UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/577,231	05/23/2000	Lundy Lewis	APB-021	3634

			EXAMINER
46141	7590	07/27/2006	ENGLAND, DAVID E

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BOSTON, MA 02109

ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 07/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

<table>
<tr><td rowspan="2"><i>Office Action Summary</i></td><td>Application No.</td><td>Applicant(s)</td><td></td></tr>
<tr><td>09/577,231</td><td>LEWIS, LUNDY</td><td></td></tr>
<tr><td></td><td>Examiner</td><td>Art Unit</td><td></td></tr>
<tr><td></td><td>David E. England</td><td>2143</td><td></td></tr>
</table>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>15 June 2006</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>4 and 13-62</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>4,13-62</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 4 and 13 – 62 are presented for examination.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

3.   Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bhoj et al.

(6304892) (hereinafter Bhoj) in further view of Yemini et al. (6249755) (hereinafter Yemini).

4.   As per claim 4, as closely interpreted by the Examiner, Bhoj teaches a method of

monitoring a state of service supported by a network, wherein the network includes a plurality of

network components, wherein the service supports a business process under service level

management in association with a service level management domain, the method comprising the

steps of:

5.   monitoring the one or more select network components to determine the state of the

service , (e.g. col. 3, line 62 – col. 4, line 11 & col. 8, lines 3 – 20);

6.   monitoring the state of the service to detect a change in the state, (e.g. col. 3, line 62 –

col. 4, line 11 & col. 8, lines 3 – 20),

7.   but does not specifically teach when the state of the service changes, determining a cause

of the change in the state of the service by performing an action, the action comprising one or

more of:

8.   invoking a routine to determine an operational characteristic of at least one of the one or

more select network components,

9.   constructing a database query of to determine the operational characteristic of at least one

of the one or more select network components, and

10.   requesting a change to one or more parameters of at least one of the one or more select

network components,

11.   Yemini teaches monitoring the state of the service to detect a change in the state, (e.g.,

col. 8, lines 17 – 67); and

12.   mapping one or more selected network components from the plurality of network

components on which the service depends to the service, (e.g., col. 8, lines 17 – 67);

13.   when the state of the service changes, determining a cause of the change in the state of

the service by performing an action, the action comprising one or more of:

14.   invoking a routine to determine an operational characteristic of at least one of the one or

more select network components,

15.   constructing a database query of to determine the operational characteristic of at least one

of the one or more select network components, (e.g., col. 8, lines 17 – 67), and

16.   requesting a change to one or more parameters of at least one of the one or more select

network components.

17.   It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine Yemini with Bhoj because mapping out where a problem is occurring in a

network can aid in finding a resolution to fix said network problem.

18.   Claims 13 – 17, 19 – 35, 37 – 53 and 55 – 62 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Yemini et al. (6249755) (hereinafter Yemini) in view of Bhoj et al.

(6304892) (hereinafter Bhoj) in further view of Taghadoss (6052722).

19.   As per claim 13, as closely interpreted by the Examiner, Yemini teaches a method for

monitoring a service supporting a business process under service level management in

association with a service level agreement, wherein the service is monitored by an enterprise

management system, wherein the business process depends on at least a portion of a network, the

method comprising the steps of:

20.   monitoring, at the enterprise management system, a parameter of the associated network

component indicating an operational characteristic of the network component that is indicative of

a state of the service. wherein the state of the service is indicative of a current level of service

relative to an agreed upon level of service in the service level agreement, (e.g., col. 12, lines 22 –

53), but does not specifically teach associating a component of the network to the service

supporting the business process under service level management in association with the service

level agreement;

21.   determining, at the enterprise management system, the state of the service from the

parameter of the monitored network component; and

22.   monitoring, at the enterprise management system, the state of the service to provide

service level management for the business process that indicates the current level of service

relative to the agreed upon level of service.

23.   Bhoj more clearly teaches a method for monitoring a service supporting a business

process under service level management in association with a service level agreement, wherein

the service is monitored by an enterprise management system, wherein the business process

depends on at least a portion of a network, the method comprising the steps of:

24.   monitoring, at the enterprise management system, the state of the service to provide

service level management for the business process that indicates the current level of service

relative to the agreed upon level of service, (e.g. col. 3, line 62 – col. 4, line 11 & col. 8, lines 3 –

20). It would have been obvious to one of ordinary skill in the art, at the time the invention was

conceived, to combine Bhoj with Yemini because it allows management of the services of the

entire data access network system (or part of it) without any one domain having complete access

to each of the data service systems of the data access network system. This also allows the data

service systems to exchange information about how a service provider is complying with its

service level agreements with its customer, outsourcer, or partner. In addition, the arrangement

enables the customers of the data access network system to monitor and verify the delivered

services against the guarantees offered by their service providers without having complete access

to the service provider's system, (e.g., Bhoj, cols. 3 – 4).

25.   Taghadoss teaches

26.   associating a component of the network to the service supporting the business process

under service level management in association with the service level agreement, (e.g., col. 5,

lines 16 – 36);

27.   determining, at the enterprise management system, the state of the service from the

parameter of the monitored network component, (e.g., col. 5, lines 16 – 36). It would have been

obvious to one of ordinary skill in the art at the time the invention was made to combine

Taghadoss with the combine system of Yemini and Bhoj because of similar reasons stated above.

28.   Referencing claim 27, as closely interpreted by the Examiner, Yemini teaches a system

for monitoring a service supporting a business process under service level management in

association with a service level agreement, wherein the service is monitored by an enterprise

management system, wherein the business process is performable in connection with at least a

portion of a network, the system comprising:

29.   a monitoring mechanism for monitoring a parameter of the associated network

component at the enterprise management system, the parameter indicating an operational

characteristic of the network component that is indicative of a state of the service, wherein the

state of the service is indicative of a current level of service relative to an agreed upon level of

service in the service level agreement, (e.g. col. 2, lines 4 – 46); and

30.   a service monitoring mechanism for monitoring, at the service management system, the

state of the service supporting the business process to provide service level management of the

business process that indicates the current level of service relative to the agreed upon level of

service, (e.g. col. 2, lines 4 – 46). Yemini does not specifically teach a mapping mechanism for

associating a component of the network to the service supporting the business process under

service level management in association with the service level agreement;

31.   a reasoning mechanism for determining, at the service management system, the state of

the service from the parameter of the monitored network component.

32.   Bhoj teaches a system for monitoring a service supporting a business process under

service level management in association with a service level agreement, wherein the service is

monitored by an enterprise management system, wherein the business process is performable in

connection with at least a portion of a network, the system comprising:

33.   a mapping mechanism for associating a component of the network to the service

supporting the business process under service level management in association with the service

level agreement, (e.g. col. 3, line 62 – col. 4, line 11 & col. 8, lines 3 – 20). It would have been

obvious to one of ordinary skill in the art, at the time the invention was conceived, to combine

Bhoj with Yemini because it allows management of the services of the entire data access

network system (or part of it) without any one domain having complete access to each of the data

service systems of the data access network system. This also allows the data service systems to

exchange information about how a service provider is complying with its service level

agreements with its customer, outsourcer, or partner. In addition, the arrangement enables the

customers of the data access network system to monitor and verify the delivered services against

the guarantees offered by their service providers without having complete access to the service

provider's system.

34.   Taghadoss teaches a mapping mechanism for associating a component of the network to

the service supporting the business process under service level management in association with

the service level agreement, (e.g., col. 5, lines 16 – 36);

35.   a reasoning mechanism for determining, at the service management system, the state of

the service from the parameter of the monitored network component, (e.g., col. 5, lines 16 – 36).

It would have been obvious to one of ordinary skill in the art at the time the invention was made

to combine Taghadoss with the combine system of Yemini and Bhoj because of similar reasons

stated above.

36.   Referencing claim 28, as closely interpreted by the Examiner, Yemini teaches the

mapping mechanism associates a parameter of the service with the parameter of the associated

network component, the service parameter comprising a variable having a state which represents

an operational characteristic of the service provided by the network, (e.g. col. 2, lines 4 – 46).

37.   Referencing claim 29, as closely interpreted by the Examiner, Yemini teaches a value for

the service parameter is determined from a value of the parameter of the associated network

component, (e.g. col. 8, lines 17 – 67).

38.   Referencing claim 30, as closely interpreted by the Examiner, Yemini teaches the

reasoning mechanism comprises a rule-based reasoning system for determining the condition of

the service teaches, (e.g. col. 2, line 47 – col. 3, line 50).

39.   Referencing claim 31, as closely interpreted by the Examiner, Yemini teaches the

reasoning mechanism comprises a model-based reasoning system for determining the condition

of the service, (e.g. col. 5, lines 42 – 64).

40.   Referencing claim 32, as closely interpreted by the Examiner, Yemini teaches the

reasoning mechanism comprises a case-based reasoning system for determining the condition of

the service, (e.g. col. 3, line 51 – col. 4, line 27).

41.   Referencing claim 33, as closely interpreted by the Examiner, Yemini the reasoning

mechanism comprises a state-transition graph reasoning system for determining the condition of

the service, (e.g. col. 12, line 54 – col. 13, line 7, *"causality graph"*).

42.   Referencing claim 34, as closely interpreted by the Examiner, Yemini teaches the

reasoning mechanism comprises a codebook reasoning system for determining the condition of

the service, (e.g. col. 9, lines 1 – 30).

43.   Referencing claim 35, as closely interpreted by the Examiner, Yemini teaches the

reasoning mechanism determines the condition of the service from a mathematical simulation of

the service, (e.g. col. 24, line 29 – col. 25, line 8).

44.   Referencing claim 40, as closely interpreted by the Examiner, Yemini teaches the

operation invokes a query to a database to determine the operational characteristic of the network

component, (e.g. col. 7, lines 9 – 60).

45.   Referencing claim 41, as closely interpreted by the Examiner, Yemini teaches the

operation invokes a second reasoning mechanism to determine the operational characteristic of

the service, (e.g. col.12, line 54 – col. 13, line 7 & col. 16, line 53 – col. 17, line 40).

46.   Referencing claim 42, as closely interpreted by the Examiner, Yemini teaches the

operation invokes an inspection of the operational characteristic of the network component, (e.g.

col.12, line 54 – col. 13, line 7 & col. 16, line 53 – col. 17, line 40).

47.   Referencing claim 43, as closely interpreted by the Examiner, Yemini teaches the

inference mechanism selects rules from the rule repository and invokes operations to implement

the selected rules until the service achieves a desired condition, (e.g. col.12, line 54 – col. 13,

line 7 & col. 16, line 53 – col. 17, line 40).

48.   Referencing claim 44, as closely interpreted by the Examiner, Yemini teaches the service

parameter represents one or more of the following operational characteristics of the service:

49.   availability;

50.   reliability;

51.   usability;

52.   integrity;

53.   security;

54.   performance;

55.   configuration; and

56.   status, (e.g. col. 8, lines 17 – 67).

57.   Claims 13 – 17, 18 – 26, 37 – 39, 45 – 53 and 55 – 62 are rejected for similar reasons as stated above.

58.   Claims 18, 36 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yemini, Bhoj and Taghadoss as applied to claims 13, 27, 35 and 49 above, and in further view of Glitho et al. (6233449) (hereinafter Glitho).

59.   As per claim 36, as closely interpreted by the Examiner, Yemini teaches an action being taken when the parameter of the monitored network component crosses a threshold, (e.g. col. 25, lines 9 – 18), but does not specifically teach the use of an agent associated with the monitored network component to generate an alarm. Glitho teaches the use of an agent associated with the monitored network component to generate an alarm, (e.g. col. 7, lines 12 – 45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Glitho with the combine system of Yemini, Bhoj and Taghadoss because utilizing an alarm in a system could alert a user about different fault events from a hardware or software device, giving the user a chance to correct any faults in the system.

60.   Claims 18 and 54 are rejected for similar reasons as stated above.

Response to Arguments

61.   Applicant's arguments filed 06/15/2006 have been fully considered but they are not

persuasive.

62.   In the Remarks, Applicant argues in substance that Yemini, Bhoj and Taghadoss do not

teach the limitations stated in claims 13 – 62 nor does Glitho cure any of their deficiencies.

63.   As to the first argument, Applicant's arguments fail to comply with 37 CFR 1.111(b)

because they amount to a general allegation that the claims define a patentable invention without

specifically pointing out how the language of the claims patentably distinguishes them from the

references.

64.   Applicant's arguments with respect to claim 4, has been considered but are moot in view

of the new ground(s) of rejection.

Conclusion

65.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

66.   a.   Ramanathan et al. U.S. Patent No. 6286047 discloses Method and system for automatic discovery of network services.

67.   b.   Caswell et al. U.S. Patent No. 6336138 discloses Template-driven approach for generating models on network services.
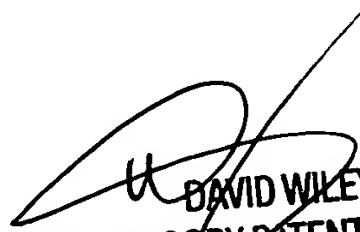
Any inquiry concerning this communication or earlier communications from the examiner should be directed to David E. England whose telephone number is 571-272-3912. The examiner can normally be reached on Mon-Thur, 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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